FORM 3

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

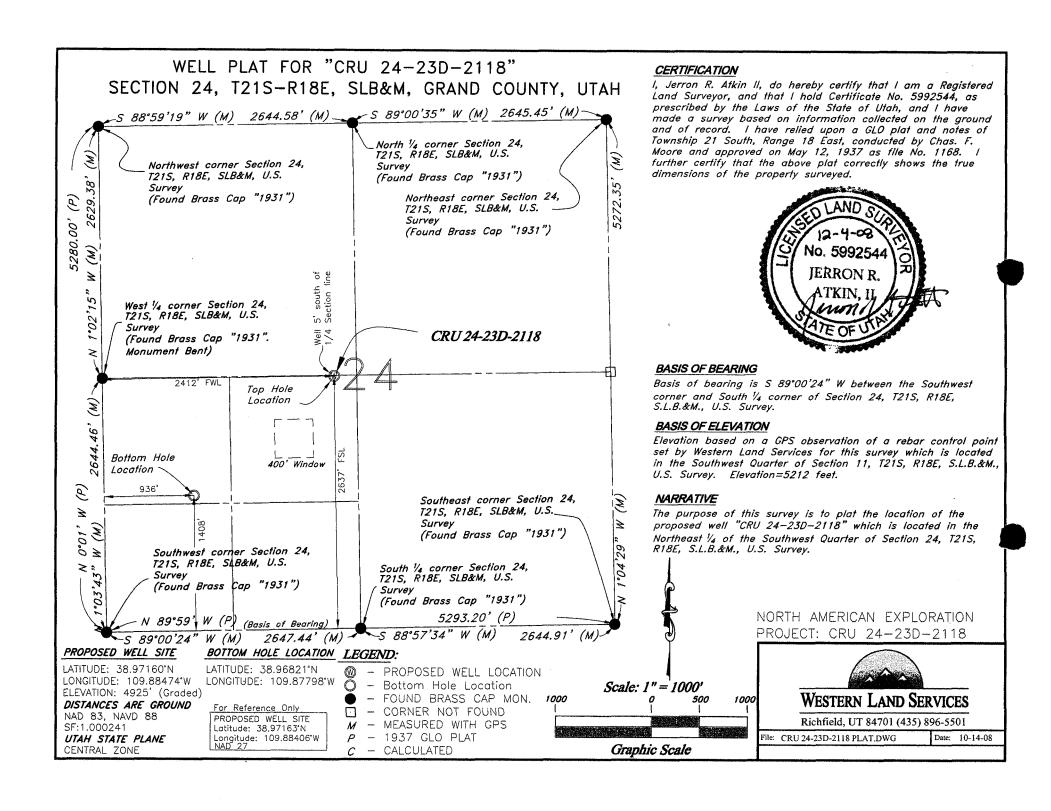
AMENDED REPORT	
(highlight changes)	

	ļ	APPLICA	TION FOR	PERMIT TO	DRILL		5. MINERAL L UTU-798		6. SURFACE: Federal
1A. TYPE OF WO	PRK: DI	RILL 🔽	REENTER [DEEPEN			7. IF INDIAN, A	ALLOTTEE OR	TRIBE NAME:
B. TYPE OF WE	LL: OIL 🗹	GAS 🗌	OTHER	SIN	GLE ZONE MULTIPLE ZON	E 🗾		AGREEMENT N	
2. NAME OF OPE	RATOR:							E and NUMBER	
		ation, LLC,	Attn: Walt L	owry		1		-23D-211	
3. ADDRESS OF 110 16th S	OPERATOR: t. Suite 1220	Denv	er st	O 710 802	PHONE NUMBER: (303) 327-7144		10. FIELD AN	D POOL, OR WI	LDCAT:
4. LOCATION OF	WELL (FOOTAGE	S) 5011.86	x 1121400	19 V 38.	771601 - 109. 829	24			WNSHIP, RANGE,
AT SURFACE:	2,637' FSL	. & 2,412' F	WL _{39,2} 41 SL & 936' FV	X 4313628 NL	PHONE NUMBER: (303) 327-7144 771601 - 109. 8231 738.968215 -109.8891		MESW		3 18E
					-109.889,	108			
			AREST TOWN OR PO]	12. COUNTY:		13. STATE: UTAH
			Green River,				Grand		
15. DISTANCE TO	NEAREST PROP	ERTY OR LEASE	LINE (FEET)	16. NUMBER O	F ACRES IN LEASE:	17. NU	MBER OF ACE	RES ASSIGNED	TO THIS WELL:
2,643' FN	L				1,600 Acres				40 Acres
	O NEAREST WELL R) ON THIS LEASE		PLETED, OR	19. PROPOSED	DEPTH:	20. BO	ND DESCRIPT	ION:	
None	,	,			5,350	UT	B000296	•	
21. ELEVATIONS	(SHOW WHETHE	R DF, RT, GR, ET	C.):		ATE DATE WORK WILL START:		TIMATED DUR	RATION:	
4,397' GF	<u> </u>			12/15/20	008	30	days ———		
24.			PROPOS	SED CASING A	ND CEMENTING PROGRAM				
SIZE OF HOLE	CASING SIZE,	GRADE, AND WE	GHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUA	ANTITY, `	/IELD, AND SL	URRY WEIGHT	
20"	16"	H40	.25" wt	40					
12-1/4"	8-5/8"	J55	24#	550	HowcoLT+.25 Ply-Flk	200) sxs	2.08 yld	l 12.8#
7-7/8"	5-1/2"	N80	17#	5,350	Stage 1:				
					HowcoLT+.25 CeloFlk	22	5 sxs	2.08 yld	12.8#
					Stage 2:				
					HowcoLT+.25 CeloFlk	22	5 sxs	2.08 yld	12.8#
						·			
25.				ATTA	CHMENTS				
VERIFY THE FOL	LOWING ARE ATT	ACHED IN ACCO	RDANCE WITH THE	UTAH OIL AND GAS C	ONSERVATION GENERAL RULES:				
✓ WELL PL	AT OR MAD PRED	ARED BY LICENS	ED SURVEYÖR OR I	ENGINEER	COMPLETE DRILLING PLAN				
EVIDENC	CE OF DIVISION OF	F WATER RIGHTS	SAPPROVAL FOR US	SE OF WATER	FORM 5, IF OPERATOR IS PE	RSON O	R COMPANY C	OTHER THAN TH	IE LEASE OWNER
<u> </u>									
NAME (PLEASE	PRINT) Terri L	Hartle	, , , , , , , , , , , , , , , , , , , ,		TITLE Authorized Ag	ent Fo	or: North	American	Exploration
SIGNATURE_	Ter	u I	da	the	DATE	3			
(This space for Sta	te use only)			A	around by the		RE	CEIVE	ED
				Whi	proved by the th Division of		E-yr		
	,	10 0	1		has and Mining		DE	C 0 8 20	JU8
API NUMBER AS	SIGNED: 4	13-019-3	1616	takaki Uu, U	APPROVAL:			0400	MINIMO

Federal Approval of this Action is Necessary

(11/2001)

DIV. OF OIL, GAS & MINING





December 9, 2008

Utah Division of Oil, Gas & Mining Diana Mason 1594 W. N. Temple Suite 1210 Salt Lake City, Utah 84114-5801

RE: North American Exploration, LLC (NAE) Requests Permission to Directionally Drill the CRU #24-23D-2118 well

Diana:

Pursuant to Rule R649-3-11 of the State's Oil & Gas Conservation regulations, NAE hereby makes application for approval to directionally drill an oil & gas well.

NAE proposes to directionally drill the CRU #24-23D-2118 well situated in Township 21 South – Range 18 East-Section 24: NE/SW with a surface hole location of 2,637' FSL – 2,412' FWL and a bottom hole location of Township 21 South-Range 18 East-Section 24: NW/SW 1,408' FSL - 936' FWL.

NAE is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location allows them to avoid the location of a stock pond and the main canyon drainage running through this area. Other alternatives were identified but the proposed access route and well location provides the most environmentally sensitive options.

NAE hereby certifies that it is the sole working interest owner within 460 feet of the entire directional well bore (federal lease UTU-79812).

Respectfully submitted,

Terri L. Hartle, Western Land Services

Designated Agent for North American Exploration

Nartle



December 5, 2008

Utah Division of Oil, Gas & Mining Diana Mason 1594 West North Temple, Suite 1210 Salt Lake City, Utah 84114-5801

RE: North American Exploration LLC-- CRU 24-23D-2118 Well

Dear Diana:

North American Exploration LLC proposes to drill the CRU 24-23D-2118 well situated in T21S – R18E; Section 24: NESW, where the Department of Interior – Bureau of Land Management is the surface and mineral owner.

Enclosed you will find the APD, SUP, Drilling Plan, Certification, Construction Drawings, Exception Location Letter, and all other necessary documents for the approval of this well.

If you have any questions regarding the submittal, please contact me at <u>Terri.Hartle@Westernls.com</u> or (435) 896-5501.

Sincerely,

Terfi Hartle

Office Administrator – Western Land Services

DEC 0 8 2008

DIV. OF OIL, GAS & MINING



December 5, 2008

Utah Division of Oil, Gas & Mining Diana Mason 1594 W. N. Temple Suite 1210 Salt Lake City, Utah 84114-5801

RE: North American Exploration, LLC (NAE) Requests Permission to Drill the CRU #24-23D-2118 well

Diana:

NAE hereby makes application for approval to drill the CRU #24-23D-2118 well situated in Township 21 South – Range 18 East; Section 24: NE/SW (2,637' FSL – 2,412' FWL) on lands administered by the Department of Interior – Bureau of Land Management (BLM). Both the surface and minerals are held by the BLM. The BLM has leased the minerals out to MSC Exploration under lease number UTU – 79812 and MSC Exploration has designated North American Exploration (NAE) as their Designated Unit Operator.

NAE proposes to drill the CRU #24-23D-2118 well to a total depth of 5,350 feet and is an exception to Rule R649-3-3. NAE is the only leasehold owner and operator within a 460 foot radius of the bore hole.

NAE proposes to use a directional drilling program for the CRU #24-23D-2118 well with a bottom hole location of Township 21 South-Range 18 East; Section 24: NW/SW (1,408' FSL - 936' FWL). This well is situated outside of the legal drilling window due to the location of a stock pond and the main canyon drainage running through this area. Other alternatives were identified but the proposed access route and well location provides the most environmentally sensitive options. Attached hereto is a plat as required by the Commission's rules and regulations.

If no objections are filed, the applicant requests that this application be approved. If objections are filed, applicant requests the matter be set for hearing and that it be advised of the hearing date.

Respectfully submitted,

Terri L. Hartle, Western Land Services

Designated Agent for North American Exploration

RECEIVED
DEC 0 8 2008

DIV. OF OIL, GAS & MINING

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I, or someone under my direct supervision, have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filling of false statements.

Executed this $\underline{\mathcal{5}}$ day of $\underline{\mathcal{V}}$, 2008.
Signature Il Marchy.
Name (pint or type) Glen Nebeker .
Position Title NEPA Specialist/Project Manager
Address <u>Western Land Services</u> .
195 N. 100 E., Richfield, UT 84701
Telephone _435-896-5501
Field representative (if not above signatory)
Address (if different from above)
Telephone (if different from above)
E-mail (optional) Glen.Nebeker@westernls.com.
Agents not directly employed by the operator must submit a letter from

Agents not directly employed by the operator must submit a letter from the operator authorizing that agent to act or file this application on their behalf.



원원 303-327-7169 전원 303-534-1400

BLM- Utah State Office Attn: Mickey Coulthard

440 West 200 South, Suite 500 Salt Lake City, Utah 84101

PH: (801) 539-4112

August 25th, 2008

Dear Mickey,

Please allow Western Land Services (WLS), who resides at 195 North 100 East, Suite #201, Richfield, Utah 84701 and their assigns to act as NAE, LLC's agent in the permitting of NAE LLC's oil, gas and other wells in the State of Utah. They may act in full capacity as our agent to file and request official documents, perform field work, and any other task necessary to file and acquire APDs. Please acknowledge and approve of this agent designation at your earliest convenience.

Thank you and if you should any problems, please do not hesitate to contact me at 303-327-7144.

Thank You,

Erik Larsen

North American Exploration LLC

Bureau of Land Management Moab Field Office Moab, Utah Application for Permit to Drill

TIGHT HOLE STATUS

Company: North American Exploration, LLC

Well No. CRU 24-23D-2118

Location: Sec 24 T21S R18E

Lease No. UTU-79812

On-Site Inspection Date: 10/01/08

All operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR § 3100 & 43 CFR § 3160), Onshore Oil and Gas Orders, the approved plan of operations and the conditions of approval. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

THIRTEEN POINT SURFACE USE PLAN

The dirt contractor will be provided with an approved copy of the surface use plan of operations before initiating construction.

1. Existing Roads:

- a. Proposed route to location (submit a map depicting access and well location, 1:100,000 scale). See attached Overview and APD maps.
- b. Location of proposed well in relation to town or other reference point: The well location is approximately 17 miles east of Green River, Utah.
- c. Plans for improvement and/or maintenance of existing roads: Existing county roads will be upgraded and maintained as necessary. When necessary, roads will be re-graded to establish a running surface of 12 feet. Where soil conditions dictate the use of stabilizing material, 6 inches of 4 inch minus granular borrow will be used.
- d. Other: NA

2. Planned Access Roads (1:24,000 scale: 12 inch surveyor stakes):

- a. Location (centerline): Refer to construction diagrams, Sheets 1-11
- b. Length of new access to be constructed: 0 miles
- c. Length of existing roads to be upgraded: 1.43 miles
- d. Maximum total disturbed width: approximately 20 feet (existing road, Sheets 1-11)
- e. Maximum travel surface width: 20 foot existing travel lanes
- f. Maximum grades: 2.2%
- g. Turnouts: 0

- h. Surface materials: 6 inch minus granular barrow
- i. Drainage (crowning, ditching, culverts, etc): Low water crossing, Sheet 3
- j. Cattleguards: 1 existing, Sheet 7
- k. Length of new and/or existing roads which lie outside the lease or unit boundary for which a BLM right-of-way is required: 0 miles

I. Other:

Surface disturbance and vehicular travel will be limited to the approved location and access road. Any additional area needed must be approved by BLM in advance.

If a right-of-way is necessary, no surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to conditions of approval in the Surface Use Program of the approved APD, relevant to any right-of-way facilities.

If a right-of-way is secured, boundary adjustments in the lease or unit shall automatically amend this right-of-way to include that portion of the facility no longer contained within the lease or unit. In the event of an automatic amendment to this right-of-way grant, the prior on-lease/unit conditions of approval of this facility will not be affected even though they would now apply to facilities outside of the lease/unit as a result of a boundary adjustment. Rental fees, if appropriate shall be recalculated based on the conditions of this grant and the regulations in effect at the time of an automatic amendment.

If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental fees, or other financial obligations determined by the BLM.

If the well is productive, the access road will be brought to Resource (Class III) Road Standards within 60 days of dismantling the rig. If upgraded, the access road must be maintained at these standards until the well is properly abandoned. If this time frame cannot be met, the Field Office Manager will be notified so that temporary drainage control can be installed along the access road.

3. <u>Location of Existing Wells</u>: On a map (1:24,000 scale), show the location of all water, injection, disposal, producing and drilling wells within a one mile radius of the proposed well, and describe the status of each.

No wells of any type exist within a one mile radius of this proposed well. (See Map 2)

4. <u>Location of Production Facilities</u>:

a. On-site facilities: If the well is a producer on-site facilities will be applied for and installed. There is no proposed pipeline at this time. If a pipeline is needed, it will be applied for by Sundry Notice and additional NEPA will be completed as needed. All or part of this equipment could be on a location:

There will be five (5) 400 BBL oil tanks and two (2) 400 BBL salt water tanks.

One (1) high pressure 36" x 10' 3 phase separator

One (1) low pressure 30" x 10' 3 phase separator

One (1) 6' x 20' heater treater

One (1) 3 phase high pressure gas production unit

One (1) gas dehydrator

One (1) gas compressor

Two (2) transfer pumps for handling produced fluids

One (1) large beam pumping unit and engine

b. Off-site facilities: None

c. Other: All permanent (in place for six months or longer) structures constructed or installed (including oil well pump jacks) will be painted a flat, non-reflective color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. Colors will be as follows: Colors will match the surrounding soils and vegetation.

All site security guidelines identified in 43 CFR § 3162.7-5 and Onshore Oil and Gas Order No. 3 shall be followed.

If a gas meter run is constructed, it will be located on lease within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and will be buried downstream of the meter until it leaves the pad. Meter runs will be housed and/or fenced. The gas meter shall be calibrated prior to first sales and shall be calibrated quarterly thereafter. All gas production and measurement shall comply with the provisions of 43 CFR § 3162.7, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.

If a tank battery is constructed on this lease, it will be surrounded by a berm of sufficient capacity to contain 1½ times the storage capacity of the largest tank. All loading lines and valves will be placed inside the berm surrounding the tank battery. All oil production and measurement shall conform to the provisions of 43 CFR § 3162.7 and Onshore Oil and Gas Order No. 4. If water is produced from the well; steel coated water tanks will be used.

5. Location and Type of Water Supply:

All water needed for drilling purposes will be obtained from (describe location and/or show on a map): Municipal water from Thompson Springs, Utah.

6. Source of Construction Material:

Pad construction material will be obtained from (if the source is Federally owned, show location on a map).

Materials needed will be obtained from a private source.

The use of materials under BLM jurisdiction will conform to 43 CFR § 3610.2-3.

7. Methods of Handling Waste Disposal:

Describe the methods and locations proposed for safe containment and disposal of waste material, e.g. cuttings, produced water, garbage, sewage, chemicals, etc.

The reserve pit will be lined with (native material, bentonite, synthetic material): The pit will be lined with 20 mil, or greater (depending on the pit substrate), thick polyethylene nylon reinforced liner material. The liner will overlay a felt liner pad only if sharp rock edges result from excavation.

The reserve pit will be located: See construction diagrams, Sheet 2. The pit walls will be sloped at no greater than 2 to 1.

The reserve pit shall be located in cut material, with at least 50% of the pit volume being below original ground level. Three sides of the reserve pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. As soon as the reserve pit has dried, all areas not needed for production will be rehabilitated.

The reserve pit will be used for the disposal of waste mud and drill cuttings. All borehole fluids will be contained in the reserve pit. All appropriate measures will be taken to prevent leakage into the substratum or onto the surface. All appropriate measures will be taken to prevent overflow, and a minimum of 2 feet of freeboard will be maintained in the reserve pit. It will be constructed on the well pad. See construction diagrams, Sheet 2.

Wastewater will not be discharged on the surface at this site and the drilling of the well will not require a wastewater management plan.

All rubbish and debris will be kept in containers on the well site, and will be hauled to an approved disposal site upon completion of drilling and completion operations and as needed during such operations. There will be no chemical disposal of any type. Self-contained, portable toilets will be used for human waste, and the waste will be disposed at an approved landfill. Sanitation will comply with local and state regulations for the disposal of human waste.

- 8. Ancillary Facilities: Trailers, garbage containers and portable toilets.
- 9. <u>Well Site Layout</u>: Depict the pit, rig, cut and fill, topsoil, etc. on a plat with a scale of at least 1"=50'. See construction diagrams, Sheet 2.

All wells, whether drilling, producing, suspended, or abandoned, will be identified in accordance with 43 CFR § 3162.6.

Access to the well pad will be from: See construction diagrams, Sheet 2.

The blooie line will be located: At least 100 feet from the well head.

To minimize the amount of fugitive dust and spray escaping from the blooie pit, the following blooie line deflection method will be employed: water injection

10. Plans for Restoration of the Surface:

The top 2 to 3 inches of topsoil material will be removed from the location and stockpiled separately on: adjacent to the pad

Topsoil along the access road will be reserved in place adjacent to the road.

Immediately upon completion of drilling, all equipment that is not necessary for production

shall be removed.

The reserve pit and that portion of the location not needed for production will be reclaimed.

Before any dirt work to restore the location takes place, the reserve pit must be completely dry.

All road surfacing will be removed prior to the rehabilitation of roads.

Reclaimed roads will have the berms and cuts reduced and will be closed to vehicle use.

All disturbed areas will be recontoured to replicate the natural slope.

The stockpiled topsoil will be evenly distributed over the disturbed area. The abandonment marker will be one of the following, as specified by BLM:

- 1) At least four feet above ground level,
- 2) At restored ground level, or
- 3) Below ground level.

In any case the marker shall be inscribed with the following: operator name, lease number, well name and surveyed description (township, range, section and either quarter-quarter or footages).

Reclamation of the surface will commence as soon after construction, drilling and well completion are concluded, as is practicable. In the event of a dry hole, the drill site and roadways will be restored to their original condition within 180 days after plugging date of the well, depending on weather and other extenuating circumstances.

All junk, debris, or other foreign material must be removed before initiating any dirt work to restore the location. The fence around the reserve pit will be maintained in good repair during the drilling operations and will be completed by constructing the fourth side while the pit is drying. It will remain in place until the pit is completely dry and the site restoration begins. All fences will be four-strand barbed wire.

The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed. All stockpiled topsoil, in proportion to the area being reclaimed, will be used in reclaiming areas without an on-going operation.

Site reclamation will include:

- Removing the road base material from the access road and any other surface that may be covered by such material;
- Recontouring the location to approximate natural contours, to the extent practicable; evenly redistributing stockpiled topsoil over the recontoured areas;
- Scarifying recontoured areas, including the access road, by use of a disk or harrow prior to seeding; and
- Drilling or broadcasting seeds.

The seed mix and rate used will be that recommended by the Authorized Officer. Seed will be drilled where-ever possible. If the seed is broadcast, then a harrow or some other implement will be dragged over the seeded area to assure seed coverage. The seed will

be certified, pure live seed, and the seed tags will be available if requested by the Authorized Officer. Certified weed free seed will be used to rehabilitate reclaimed land.

All hillsides and other places where the contractor has moved earthen materials to facilitate operations will be restored to as near original condition as practical. The surface of the re-contoured land will be left in a slightly roughened condition to collect precipitation and to promote seed germination. The site will be fenced with four-strand barbed wire until vegetation is reestablished.

Road base material, used in the construction of the access road and pad, will be removed from the site and disposed in a proper manner. If the reserve pit has adequate capacity, then some or all of the gravel will be buried in the reserve pit, provided that the gravel is not contaminated by oil or other waste materials. The access road will be recontoured using of an excavator or similar equipment, rather than simply ripping the surface.

If culverts were used during road construction, they will be removed from the site and disposed in an approved landfill. The concrete cellar will be removed from the site and similarly disposed in a landfill, or with the approval of the Authorized Officer may be broken down into small pieces and buried during the Recontouring on the site.

During the life of the project and until the site is released from liability for reclamation, the project will be inspected at least several times a year for noxious weeds. If invasive noxious weeds are found, the weeds will be treated to eliminate further reproduction (spread), and treatment shall continue until the weeds have been eradicated. If noxious weeds are found, the BLM will be notified of their occurrence.

11. <u>Surface and Mineral Ownership</u>:

The surface of the proposed well site is federally owned and is administered by the Bureau of Land Management, United States Department of Interior.

12. Other Information:

a. Archeological Concerns: A cultural survey was completed by Western Land Services and one existing (1) site was identified that was eligible for inclusion on the National Register for Historic Places. This site will be avoided.

The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the BLM Field Office. Within five (5) working days, the BLM will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and
- A time frame for the BLM to complete an expedited review under 36 CFR § 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the BLM are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the BLM will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The BLM will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the BLM that the required mitigation has been completed, the operator will then be allowed to resume construction.

b. Other:

Heavy equipment, used to construct and rehabilitate the well pad and access road, will be cleaned and/or sprayed to remove any noxious or invasive weeds and seeds, prior to being moved to the project site. Any other equipment and vehicles, that have been used in other locations, where noxious weeds or seeds could have attached to the equipment, will also be sprayed and/or cleaned.

Any accumulation of hydrocarbons in the reserve pit will be removed and recovered for sale unless it is determined by the Authorized Officer to be waste oil. All waste oil will be disposed of properly at approved facilities.

For reclamation, the pit liner, which is exposed above the cuttings, will be cut and removed from the site and disposed in an authorized landfill. The reserve pit will be backfilled to slightly above grade to allow for settling of the unconsolidated fill material.

All equipment and vehicles will be confined to the access roads and well pad.

Any facilities in an existing right of way that are damaged as a result of the oil and gas operations will be repaired or replaced.

Fire suppression equipment will be available to suppress any wildfires caused by construction or related activities. In the event of a wildfire, the Moab Fire Center will be notified (435)259-1850.



North American Exploration, LLC CRU (Cactus Rose Unit) 24-23D-2118 SENW Sec. 24-T21S-R18E Grand County, Utah Lease # UTU 079812

ONSHORE ORDER 1 - DRILLING PLAN

1. Estimated Tops of Geological Markers:

Formation	Depth (TVD K.B.)	Depth (MD K.B.)
Upper Mancos	Surface	Surface
Dakota	2421'	2589'
Summerville	2570'	2779'
Moab Tongue	2985'	3310'
Entrada	3086'	3440'
Carmel	3328'	3750'
Navajo	3414'	3859'
Wingate	4127'	4772'
Chinle	4474'	5216'
Proposed TD	4562'	5350'

2. <u>Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:</u> (per Proposed Wellbore Construction Diagram attached)

Formation	Depth (TVD K.B.)	Substance
Upper Mancos	Surface	O/G/W
Dakota	2421'	O/G/W
Summerville	2570'	0′0/W
Moab Tongue	2985'	O/G/W
Entrada	3086'	O/G/W
Carmel	3328'	O/G/W
Navajo	3414'	O/G/W
Wingate	4127'	O/G/W
Chinle	4474'	O/G/W

3. <u>Pressure Control Equipment: (3000 psi schematic attached)</u>

- A. Type: Eleven (11) inch 3M double gate hydraulic BOP on 3,000 psi casinghead, with 3M psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 1*.
- B. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- C. Pressure Rating: 3,000 psi BOPE.

- D. Kelly will be equipped with lower Kelly valves.
- E. Testing Procedure:

Blow-Out Preventer (Pipe Rams and Blind Rams)

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

4. **Proposed Casing & Cementing Program:**

A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	16" O.D.	0.25" w.t.	H40		40' (BGL)
12-1/4"	8-5/8" O.D.	24.0#	J55	ST&C	0 – 550' (KB) est.
7-7/8"	5-1/2"	17.0#	N80	LT&C	0 – 5,350' (KB) est.

The surface casing will have guide shoe, 1 joint, and float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and then place bowspring centralizers on every other collar to surface (~6 centralizers total). Thread lock guide shoe and bottom of float collar.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

B. Casing Design Parameters:

Depth (MD)	Casing	Collapse (psi)/SF	Burst (psi)/SF	Tension (Mlbs)/SF
40' (GL)	16" OD	NA NA	NA	NA
550' (KB)	8-5/8", 24#/ft, J55, STC	1370/9.76 (a)	2950/3.21 (b)	244M/33.89 (c)
5350' (KB)	5-1/2", 17.0#/ft, K55, LTC	6280/2.93 (d)	7740/4.01 (e)	348M/4.26 (f)

- (a.) based on full evacuation of pipe with 9.0 ppg fluid on annulus
- (b.) based on 9.0 ppg BHP with no fluid on annulus minus 0.1 psi/ft gas gradient
- (c.) based on casing string weight in air
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.0 ppg gradient, gas to surface, with no fluid on annulus, 0.1 psi/ft gas gradient
- (f.) based on casing string weight in air

C. PROPOSED CEMENTING PROGRAM

Surface Casing - Cemented to surface

CA	ASING	SLURRY	FT. of FILL	CEMENT TYPE	sxs	EXCESS (%)	WEIGHT (ppg)	YIELD (ft³/sx)
8	3-5/8"	Lead/Tail	550	Howco Rockies LT	200	100%	12.8	2.08
1				cement + 0.25 pps				
L				Poly-E-Flake				

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft³/sx) cement will be premium cement w/ 3% CaCl₂.+ 0.25 pps celloflake. Volume as required.

Production Casing - Cemented TD to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft³/sx)
5-1/2"	Stage 1	1850	Howco Rockies LT + 0.25 pps celloflake	225	50% over gauge	12.8	2.08
5-1/2"	Stage 2	1800	Howco Rockies LT + 0.25 pps celloflake	225	50% over gauge	12.8	2.08

Cement volumes for the 5-1/2" Production Casing will be calculated to provide a top of cement to 1900' (500' above projected Dakota top @ 2421'). Cement volumes are approximate and are calculated under the assumption that a cauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole and adding 50% excess. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi

compressive strength at the casing shoe prior to drilling out.

5. <u>Drilling Fluids (mud) Program:</u>

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' - 40' (KB)	<8.4	No cntrl	28	Water
40'-550' (KB)	8.4-8.6	No cntrl	28-36	FW Gel/Lime
550'-5350' (KB)	8.4-9.0	8 - 10 ml	32-42	Gel/Polymer Fresh
				Water Base

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

6. <u>Evaluation Program:</u>

Tests:

As required.

Coring:

No cores are currently planned.

<u>Samples:</u> Two (2) sets of cleaned, dried, labeled formation samples will be taken not less than every 20' from the top of the Dakota (~2421' TVD RKB) to Total Depth.

Logging

- Dual Induction Triple Combo (CNL/FDC/DIL/GR/CAL)
- Cement Bond Log / Gamma Ray:
 TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

7. Abnormal Conditions:

No abnormal temperatures or pressures are anticipated. No H_2S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 1300 psi (calculated at 0.52 psi/ft of hole) and maximum anticipated surface pressure equals approximately 1050 psi (anticipated bottom hole pressure minus gas gradient of 0.1 psi/ft to surface).

8. Anticipated Starting Dates:

Anticipated Commencement Date-

Must spud prior to December 21, 2008.

Drilling Days-

Approximately 12 days

Completion Days

Approximately 10 days

• Anticipate location construction immediately after permit issued.

9. <u>Variances:</u>

None anticipated

10. Other:

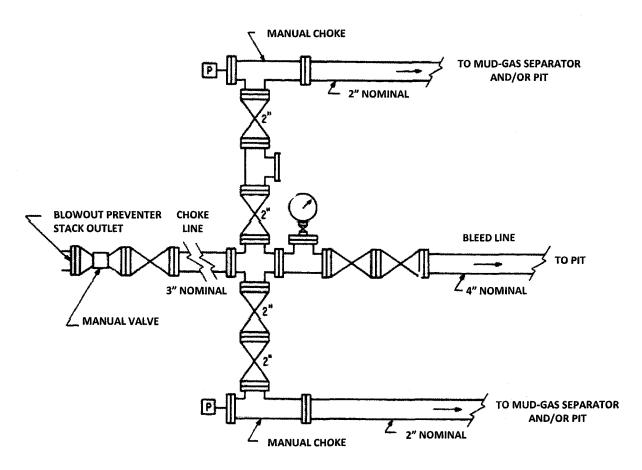
A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the Bureau of Land Management upon their receipt.

Single Shot directional surveys will be dropped on every bit trip or will be run on slick line not less than every 1000' of hole drilled, and a survey will be dropped at TD.



Cactus Rose Unit 24-23D-2118

Section 24-T21S-R18E Grand County, Utah



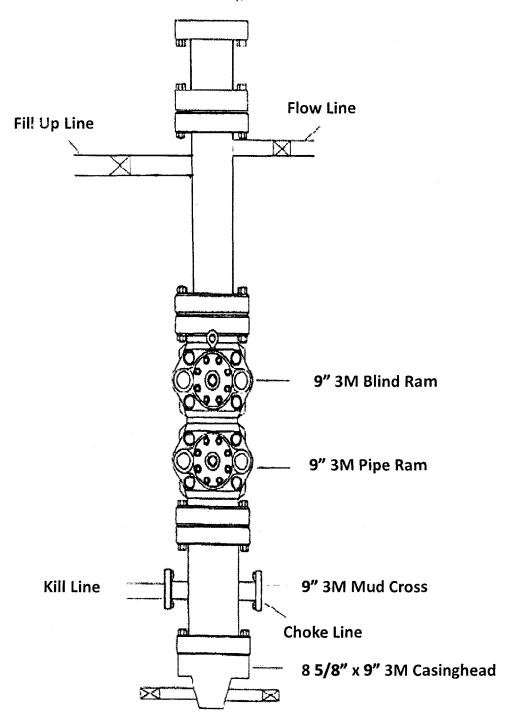
3M Choke Manifold Schematic



Proposed 3M BOP Equipment Diagram

CRU 24-23D-2118

Section 24-T21S-R18E Grand County, Utah



Cactus Rose Unit 24-23D-2118

Proposed Wellbore Construction Diagram

Well: CRU 24-23D-2118

Well Type: Directional- Build & Hold
Surface Location: 2637' FSL, 2412' FWL, Sec. 24, T21S, R18E
Latitude / Longitude: SHL: 38.9716300°, 109.8840600; BHL: 38.9682438°, -109.8773011° (NAD 27)
Bottom Hole Location: 1408' FSL, 936' FEL, Sec. 24, T21S, R18E

Permitted TD: 5350' MD

Author-Version-Date: WDL - Rev 1 - 01 December 2008

AFE Number: 08-019D

Field: Cactus Rose Unit API Well Number: 43-019-00000 Elevation (ft): ~4925'

KB to GL (ft): ~14'

Objectives: Evaluate Navajo & Wingate Formations

Directional well

Geology Logs		asing and Cement	Depth (ft, MD)	Hole Size	Bit Run	Directional and Mud Data
Surface is the Upper Man	cos		8.625" 3M Cameron head	40' of 16"	0.25" w.t. co	nductor in 20" hole with 6' diameter x 4' deep cellar
	Surface Casing Cement: Pump spacer. Pump 200 sx (2.08 cf 12.8 ppg Howco Rockies LT cr #/sx Poly-E-Flake. 100% exc designed to return to surface. job w/ Premium cewment + 2% ppg. if necesary.	isx) mixed @ ement + 0.125 ess, cement . Perform top CaCl2 @ 15.8		12 1/4" Hole	Bit #1 12.25" Use retip bit or air hammer bit if drilled with air.	Preferred Procedure: FW Gel/Lime spud mud + hI-vis sweeps Use fibrous LCM (sawdust, cedar fiber) to control LC "Dry drilling" should be considered if LC persists.
	10 min	sing to 1500 psi / prior to drill out. 55, STC (0-500')	550' MD/TVD			Drop Inclination survey prior to POOH to run casing.
			330 MD/14D			(No Formation Integrity Test required)
Dakota @ 2421' TVD	requi rams, anni Propose Test Ran	OP stack per BLM remembs w/ pipe blind rams and alar preventer. and TOC @ 1900'		7-7/8" Hole	Bit #2	PU directional tools at 800' and directionally drill well. KOP=800' MD/TVD. BUR=2.5'/100'. Terminal angle is 38.6'. Azimuth is 122.7 TD is 5350' MD & 4585' TVD. Drillling Fluids for Production Hole: Gel/Polymer Water Base Mud. Mud up with prehydrated gel/polymer (PHPA mud in fresh water. Run Hi-Viscosity gel sweeps every 200-300 ft. and/or for tight hole. Utilize Fed Pac-R for FL control and Fed Rheosmart for rheology control
Summerville @ 2570' 1 Moab Tongue @ 2985'	VD Test Ann	50 psi / 10 min 00 psi / 10 min nular to: 100 psi / 10 min				Construction and Construction and Construction
Entrada @ 3086' TVD Carmel @ 3328' TVD Navajo @ 3414' TVD	Longstring Cement: Pump spacer. Mix all blends 40% of caliper volume. Volumes sho on 10-1/2" hole w/ cmt to surfar Pump 600 sx Howco Rockies (2.08 cf/sx) + 0.125 #/sx Poly-E @ 12.8 ppg. Displace w/ FW. Tool. 2nd Stage: Pump 20 bl Pump 900 sx Howco Rockies 0.125 #/sx Poly-E-Flake mixec Displace w/ ~63 bbls	excess over wn are based cc. 1st Stage: s LT Cement E-Flake mixed Open Stage bl FW spacer. LT Cement + d @ 12.8 ppg.	0 0 0	Stage Collar @ 3500'	Bit#3	
Wingate @ 4127' TVD				(g) 3300		
Chinle @ 4474' TVD					Bit #4	
TD 4562' TVD	5-1/2", 17#, N80,	LTC (0'-5350')	4562' TVD 5350' MD			
	1-0-1		APPROVAL	<u>s</u>		



North American Exploration, LLC

Grand County, Utah Cactus Rose Unit CRU-24-23D-2118 Wellbore #1

Plan: Plan #1

Standard Planning Report

24 November, 2008



North American Exploration, LLC CRU-24-23D-2118

Grand County, Utah Plan #1

PROJECT DETAILS: Grand County, Utah

Geodetic System: US State Plane 1927 (Exact solution) Datum: NAD 1927 (NADCON CONUS)

Ellipsoid: Clarke 1866 Zone: Utah Central 4302



3354.0 3782.7

3445.0 3899.2

3844.0 4409.8 4105.0 4743.9

4461.0 5199.5

Carmel

Navajo Kayenta

Wingate

Chinle

Azimuths to True North Magnetic North: 11.38°

Magnetic Field Strength: 51987.1snT Dip Angle: 65.01° Date: 11/24/2008 Model: IGRF200510

2000

Target

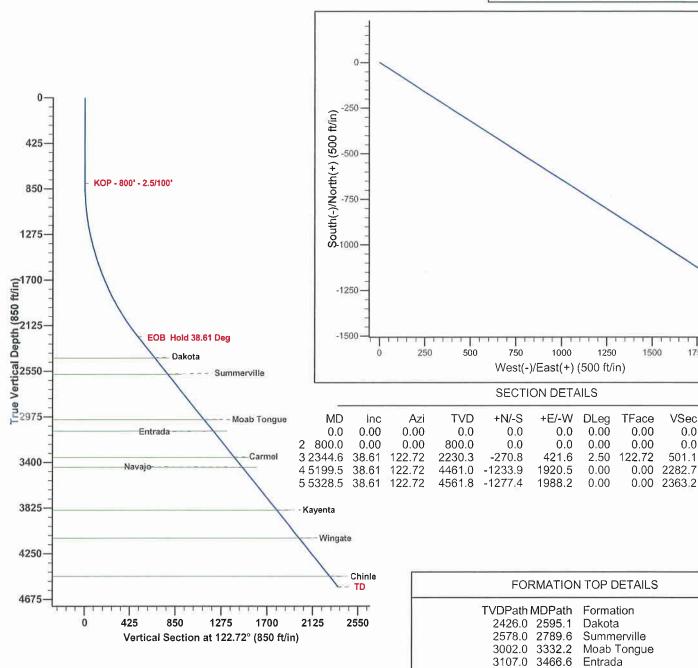
1750

VSec

0.0

0.0

501.1







Planning Report

TVD Reference:

MD Reference:

Database:

EDM 2003.16 Single User Db

Company:

North American Exploration, LLC

Project: Site:

Grand County, Utah Cactus Rose Unit

Well: Wellbore: Design:

CRU-24-23D-2118 Wellbore #1 Plan #1

Local Co-ordinate Reference:

Well CRU-24-23D-2118

WELL @ 4939.0ft (Original Well Elev) WELL @ 4939.0ft (Original Well Elev)

North Reference:

Survey Calculation Method:

True

Minimum Curvature

Project

Grand County, Utah

Map System:

US State Plane 1927 (Exact solution)

NAD 1927 (NADCON CONUS)

Geo Datum: Map Zone:

Utah Central 4302

System Datum:

Mean Sea Level

Site

Cactus Rose Unit

Site Position:

Lat/Long

Northing: Easting:

72,128.30_m

Latitude:

38° 58' 17.868 N Longitude:

1.04 °

Position Uncertainty:

0.0 ft

Slot Radius:

749,637.74 m

Grid Convergence:

109° 53' 2.616 W

Well

From:

CRU-24-23D-2118

Well Position

0.0 ft 0.0 ft

Northing: Easting:

72,128.30 m 749,637.74 m

Latitude: Longitude: 38° 58' 17.868 N

Position Uncertainty

0.0 ft

Wellhead Elevation:

ft

Ground Level:

109° 53' 2.616 W 4,925.0 ft

Wellbore

Wellbore #1

Plan #1

+N/-S

+E/-W

Magnetics

Model Name

Sample Date

Declination (°)

Dip Angle

Field Strength

(nT)

IGRF200510

11/24/2008

11.38

65.01

51,987

Design

Audit Notes:

Version:

Phase:

PROTOTYPE

Tie On Depth:

0.0

Vertical Section:

Depth From (TVD)

+N/-S (ft)

+F/-W (ft)

Direction (°)

(ft) 0.0

0.0

0.0

122.72

Plan Sections

Measured			Vertical			Dogleg	Build	Turn		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Rate	Rate	Rate	TFO	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,344.6	38.61	122.72	2,230.3	-270.8	421.6	2.50	2.50	0.00	122.72	
5,199.5	38.61	122.72	4,461.0	-1,233.9	1,920.5	0.00	0.00	0.00	0.00	CRU 24-23D-2118
5,328.5	38.61	122.72	4,561.8	-1,277.4	1,988.2	0.00	0.00	0.00	0.00	

11/24/2008 12:08:59PM COMPASS 2003.16 Build 42 Page 2



Crescent Directional Drilling L.P.

Planning Report

Database; EDM 2003.16 Single User Db Company: North American Exploration, LLC

Project: Grand County, Utan Site: # Cactus Rose Unit CRU-24-23D-2118 Wellbore: Wellbore #1 Plan #1

Local Co-ordinate Reference: TVD Reference: MD Reference:

North Reference: Survey Calculation Method: Well CRU-24-23D-2118

WELL @ 4939.0ft (Original Well Elev) WELL @ 4939.0ft (Original Well Elev)

True

Minimum Curvature

anned Survey		7 - Na 1709 (1720)	agerakan ne		ersen a see	Segunda Reference	170,000 20 0	er wer in teleview	and the second of the second
Measured Depth (ft)	Inclination	Azimüth (°)	Vertical Depth (ft)	#N/-S (ft)		Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (*/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0 0.0	0.0	0.0	0.00	0.00 0.00	0.00 0.00
700.0 800.0	0.00 0.00	0.00 0.00	700.0 800.0	0.0	0.0 0.0	0.0 0.0	0.00 0.00	0.00	0.00
KOP - 800		0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	2.50	122.72	900.0	-1.2	1.8	2.2	2.50	2.50	0.00
1,000.0	5.00	122.72	999.7	- 4.7	7.3	8.7	2.50	2.50	0.00
1,100.0	7.50	122.72	1,099.1	-10.6	16.5	19.6	2.50	2.50	0.00
1,200.0	10.00	122.72	1,198.0	-18.8	29.3	34.8	2.50	2.50	0.00
1,300.0	12.50	122.72	1,296.0	- 29.4	45.7	54.3	2.50	2.50	0.00
1,400.0	15.00	122.72	1,393.2	-42.2	65.7	78.1	2.50	2.50	0.00
1,500.0	17.50	122.72	1,489.2	-57.3	89.2	106.1	2.50	2.50	0.00
1,600.0	20.00	122.72	1,583.9	-74.7	116.3	138.2	2.50	2.50	0.00
1,700.0	22.50	122.72	1,677.0	-94.3	146.8	174.5	2.50	2.50	0.00
1,800.0	25.00	122.72	1,768.6	-116.1	180.7	214.7	2.50	2.50	0.00
1,900.0	27.50	122.72	1,858.2	-140.0	217.9	259.0	2.50	2.50	0.00
2,000.0	30.00	122.72	1,945.9	-166.0	258.3	307.0	2.50	2.50	0.00
2,100.0	32.50	122.72	2,031.4	-194.0	302.0	358.9	2.50	2.50	2.00
2,200.0	35.00	122.72	2,114.5 2,195.2	-224.0	348.7 398.4	414.5 473.6	2.50	2.50 2.50	0.00 0.00
2,300.0 2,344.6	37.50 38.61	122.72 122.72	2,195.2	-256.0 -270.9	398.4 421.6	501.1	2.50 2.50	2.50	0.00
	38.61 Deg	144.72	2,200.0	2,0.0	421.0	001.1	2.00	2.00	0.00
2,400.0	38.61	122.72	2,273.6	-289.6	450.7	535.7	0.00	0.00	0.00
2,500.0	38.61	122.72	2,273.0	-323.3	503.2	598.1	0.00	0.00	0.00
2,595.1	38.61	122.72	2,426.0	-355.4	553.1	657.4	0.00	0.00	0.00
Dakota			_,	•	••••				
2,600.0	38.61	122.72	2,429.9	-357.0	555.7	660.5	0.00	0.00	0.00
2,700.0	38.61	122.72	2,508.0	-390.8	608.2	722.9	0.00	0.00	0.00
2,789.6	38.61	122.72	2,578.0	-421.0	655.2	778.8	0.00	0.00	0.00
Summervi	lle								
2,800.0	38.61	122.72	2,586.1	-424.5	660.7	785.3	0.00	0.00	0.00
2,900.0	38.61	122.72	2,664.3	-458.2	713.2	847.7	0.00	0.00	0.00
3,000.0	38.61	122.72	2,742.4	-492.0	765.7	910.1	0.00	0.00	0.00
3,100.0	38.61	122.72	2,820.5	-525.7	818.2	972.5	0.00	0.00	0.00
3,200.0	38.61	122.72	2,898.7	-559.4	870.7	1,034.9	0.00	0.00	0.00
3,300.0	38.61	122.72	2,976.8	-593.2	923.2	1,097.3	0.00	0.00	0.00
3,332.2	38.61	122.72	3,002.0	-604.0	940.1	1,117.4	0.00	0.00	0.00
Moab Tong 3,400.0	gue 38.61	122.72	3,055.0	-626.9	975.7	1,159.7	0.00	0.00	0.00
3,400.0 3,466.6	38.61	122.72	3,055.0 3,107.0	-626.9 -649.4	9/5./ 1,010.7	1,159.7	0.00	0.00	0.00
Entrada	30.01	122.12	5, 107.0	-043.4	1,010.7	1,201.0	0.00	0.00	3.00
		100 75	0 (00 :	0000	4 000 0	4.000.4	2.22	2.22	0.00
3,500.0	38.61	122.72	3,133.1	-660.6	1,028.2	1,222.1	0.00	0.00	0.00
3,600.0 3,700.0	38.61	122.72 122.72	3,211.2 3,289.4	-694.4 -728.1	1,080.7 1,133.2	1,284.5 1,347.0	0.00 0.00	0.00 0.00	0.00 0.00
3,700.0 3,782.7	38.61 38.61	122.72	3,354.0	-720.1 -756.0	1,133.2	1,347.0	0.00	0.00	0.00
Carmel	00.01	1 44, 1 4,	5,554.0	, 55.5	., . ,	1,000.0	0.00	0.00	5.00
3,800.0	38.61	122.72	3,367.5	-761.8	1,185.7	1,409.4	0.00	0.00	0.00
3,899.2	38.61	122.72	3,445.0	-795.3	1,237.8	1,471.3	0.00	0.00	0.00



Crescent Directional Drilling L.P.

Planning Report

Database:

EDM 2003.16 Single User Db

Company: Project: North American Exploration, LLC Grand County, Utah

Site: Well: Wellbore:

Design:

Cactus Rose Unit CRU-24-23D-2118 Wellbore #1

Plan #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well CRU-24-23D-2118

0.00

WELL @ 4939.0ft (Original Well Elev) WELL @ 4939.0ft (Original Well Elev)

True

Minimum Curvature

nned Survey				V 10 10 10 10 10 10 10 10 10 10 10 10 10		t S Paneirio			
		Azimuth	Vertical	+N/-S	+E/W	Vertical Section:	Doğleg Rate	Build Rate	Turn Rate
*(ft) = 1	ž=(°)	(°)	. : (ft)'	(ft)	(ft)	(tt) :	(°/100ft)	(°/100ft)	°/100ft)
Navajo									
3,900.0	38.61	122.72	3,445.6	- 795.5	1,238.2	1,471.8	0.00	0.00	0.00
4,000.0	38.61	122.72	3,523.8	-829.3	1,290.7	1,534.2	0.00	0.00	0.00
4,100.0	38.61	122.72	3,601.9	-863.0	1,343.2	1,596.6	0.00	0.00	0.00
4,200.0	38.61	122.72	3,680.0	- 896.7	1,395.7	1,659.0	0.00	0.00	0.00
4,300.0	38.61	122.72	3,758.2	-930.5	1,448.2	1,721.4	0.00	0.00	0.00
4,400.0	38.61	122.72	3,836.3	-964.2	1,500.7	1,783.8	0.00	0.00	0.00
4,409.8	38.61	122.72	3,844.0	-967.5	1,505.9	1,789.9	0.00	0.00	0.00
Kayenta									
4,500.0	38.61	122.72	3,914.5	-997.9	1,553.3	1,846.2	0.00	0.00	0.00
4,600.0	38.61	122.72	3,992.6	-1,031.7	1,605.8	1,908.6	0.00	0.00	0.00
4.700.0	38.61	122.72	4,070.7	-1.065.4	1,658.3	1,971.0	0.00	0.00	0.00
4,743.9	38.61	122.72	4,105.0	-1,080.2	1,681.3	1,998.4	0.00	0.00	0.00
Wingate									
4,800.0	38.61	122.72	4,148.9	-1,099.1	1,710.8	2,033.4	0.00	0.00	0.00
4,900.0	38.61	122.72	4,227.0	-1,132.9	1,763.3	2,095.8	0.00	0.00	0.00
5,000.0	38.61	122.72	4,305.1	-1,166.6	1,815.8	2,158.2	0.00	0.00	0.00
5,100.0	38.61	122.72	4.383.3	-1.200.3	1.868.3	2.220.6	0.00	0.00	0.00
5,199.5	38.61	122.72	4,461.0	-1,233.9	1,920.5	2,282.7	0.00	0.00	0.00
Chinle - CRU	24-23D-2118				•	•			
5,200.0	38.61	122.72	4,461.4	-1,234.1	1,920.8	2,283.1	0.00	0.00	0.00
300.0	38.61	122.72	4,539.6	-1,267.8	1,973.3	2,345.5	0.00	0.00	0.00
5.328.5	38 61	122.72	4,561.8	-1.277.4	1,988.2	2.363.2	0.00	0.00	0.00

Targets Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir.	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (m)	Easting (m)	Latitude	Longitude
CRU 24-23D-2118 - plan hits target - Point	0.00	0.00	4,461.0	-1,233.9	1,920.5	71,762.85	750,229.81	38° 58' 5.671 N	109° 52' 38.301 W

Formations			en de mare neue elemento en el caracterio de la caracterio de la composició de la caracterio de la composició La composició de de la composició de la caracterio de la caracterio de la caracterio de la caracterio de la ca
Measured Depth (ft)			Dip Dip Direction Lithology (°) (°)
3,466.6		Entrada	0.00
5,199.5	4,461.0	Chinle	0.00
3,782.7	3,354.0	Carmel	0.00
3,332.2	3,002.0	Moab Tongue	0.00
2,789.6	2,578.0	Summerville	0.00
3,899.2	3,445.0	Navajo	0.00
2,595.1	2,426.0	Dakota	0.00
4,409.8	3,844.0	Kayenta	0.00

4,105.0 Wingate

4,743.9





Planning Report

TVD Reference:

MD Reference:

Database: EDM 2003.16 Single User Db

Company: North American Exploration, LLC
Project: Grand County, Utah

Site: Cactus Rose Unit Well: CRU-24-23D-2118 Wellbore: Wellbore #1 Design: Plan #1 Local Co-ordinate Reference: Well CRU-24-23D-2118

WELL @ 4939.0ft (Original Well Elev) WELL @ 4939.0ft (Original Well Elev)

North Reference: True

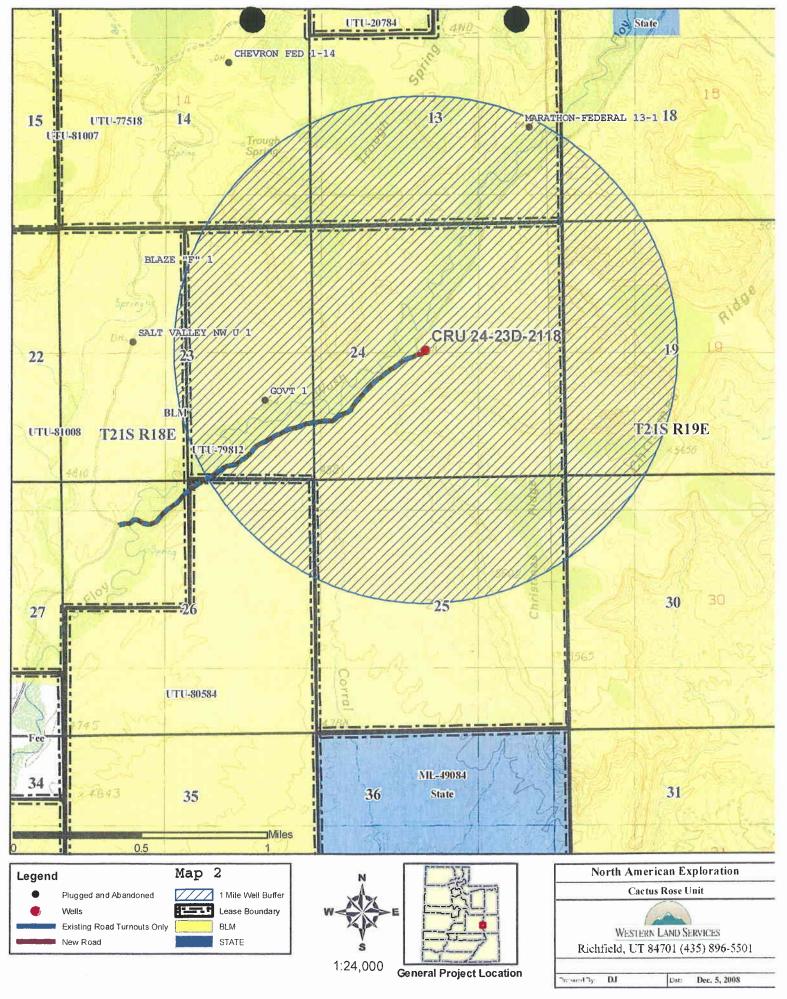
Survey Calculation Method: Minimum Curvature

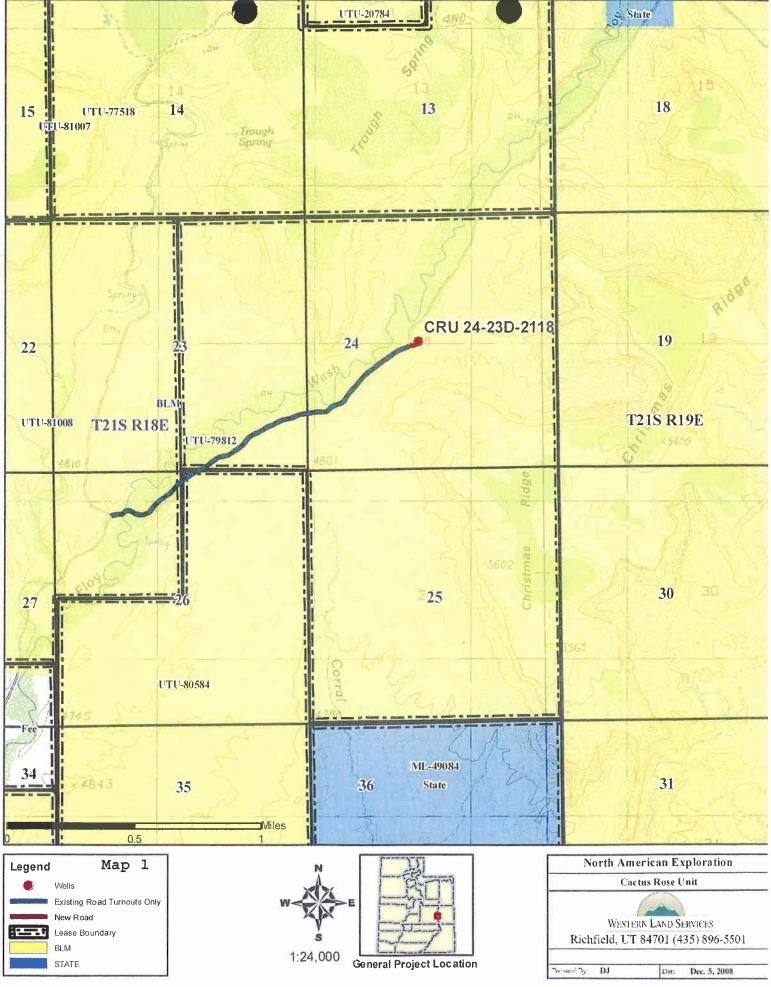
Plan Annotations

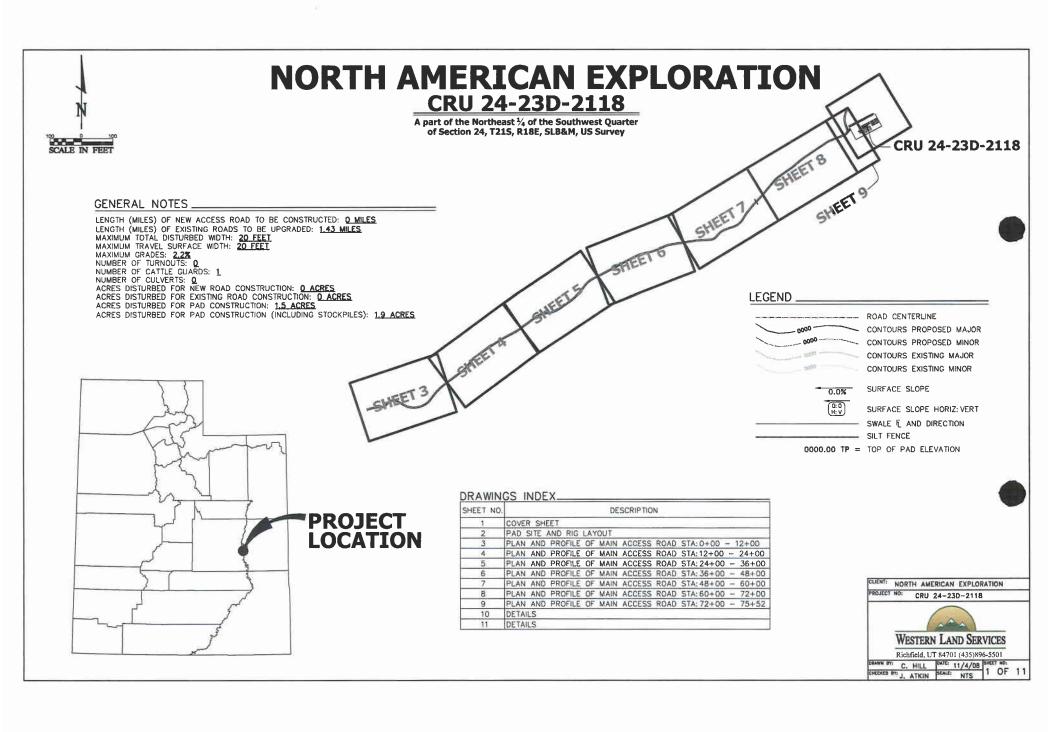
Measured Depth (ft)	Vertical Depth (ft)	Local Coordin +N/-S (ft)	ates +E/-W (ft)	Comment
800.0	800.0	0.0	0.0	KOP - 800' - 2.5/100'
2,344.6	2,230.3	-270.9	421.6	EOB Hold 38.61 Deg
5,328.5	4,561.8	-1,277.4	1,988.2	TD

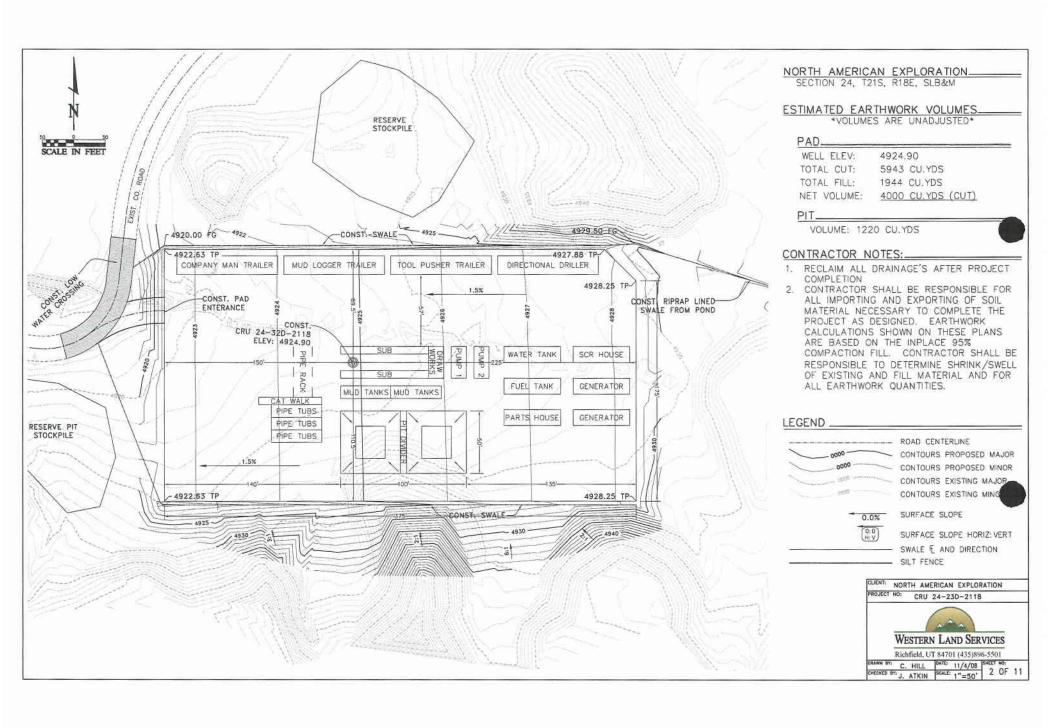
11/24/2008 12:08:59PM Page 5 COMPASS 2003.16 Build 42

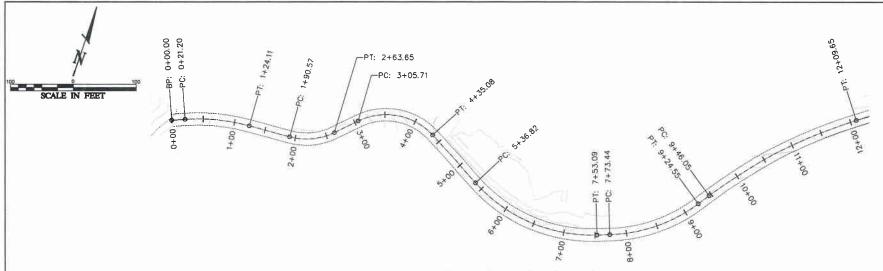
FORMATION	TVDSS DEPTH	4939		КВ
DAKOTA	2513		2426	tvdkb
SUMMERVILLE	2361		2578	tvdkb
MOAB_TONGUE	1937		3002	tvdkb
ENTRADA	1832		3107	tvdkb
CARMEL	1585		3354	tvdkb
OLAVAN	1494		3445	tvdkb
KAYENTA	1095		3844	tvdkb
WINGATE	834		4105	tvdkb
CHINLE	478		4461	tvdkb
MD	120' MD from Chinle Top			





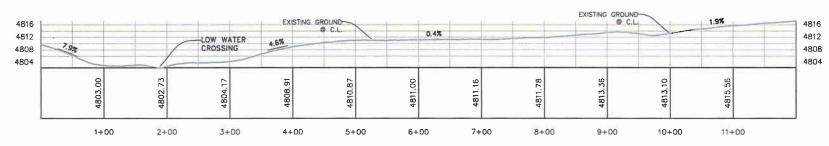






PLAN OF STA: 0+00-12+00

HORIZONTAL SCALE: 1"=100' VERTICAL SCALE: 1"=20'



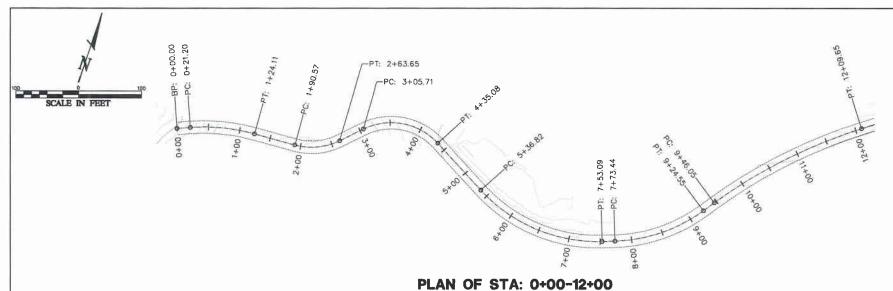
PROFILE OF STA: 0+00-12+00

HORIZONTAL SCALE: 1"=100" VERTICAL SCALE: 1"=20"

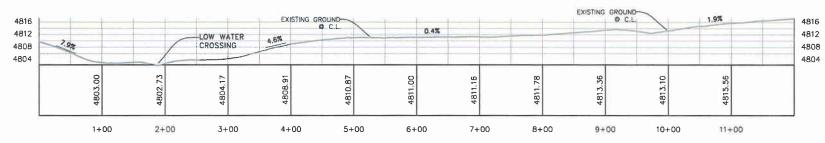
CONTRACTOR NOTES:_

- CONTRACTOR TO FLAT BLADE EXISTING ROAD. WIDEN AS NECESSARY.
- 2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH COUNTY PUBLIC WORKS STANDARD.
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HORIZONTAL SCALE: 1"=100' VERTICAL SCALE: 1"=20'



PROFILE OF STA: 0+00-12+00

HORIZONTAL SCALE: 1"=100" VERTICAL SCALE: 1"=20"

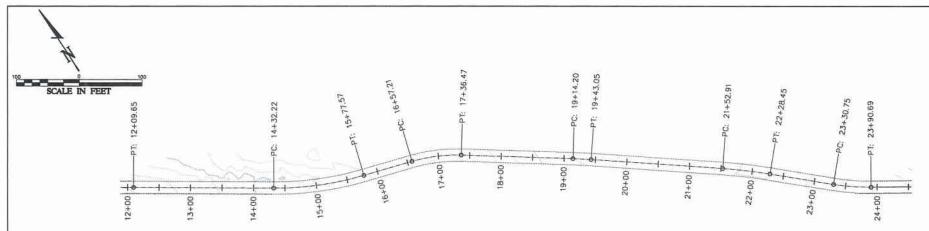
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CLIENT: NORTH AMERICAN EXPLORATION
PROJECT NO: CRU 24-23D-211B

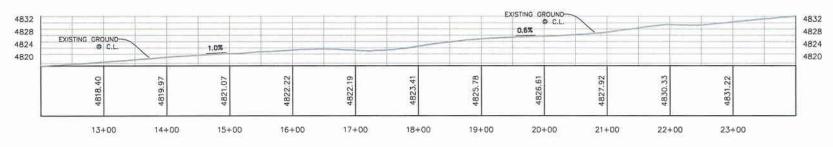


CHECKED BY: J. ATKIN SCALE: 1"=100" 3 OF 11



PLAN OF STA: 12+00-24+00

HORIZONTAL SCALE: 1"=100" VERTICAL SCALE: 1"=20"



PROFILE OF STA: 12+00-24+00

HORIZONTAL SCALE: 1"=100" VERTICAL SCALE: 1"=20"

CONTRACTOR NOTES:_

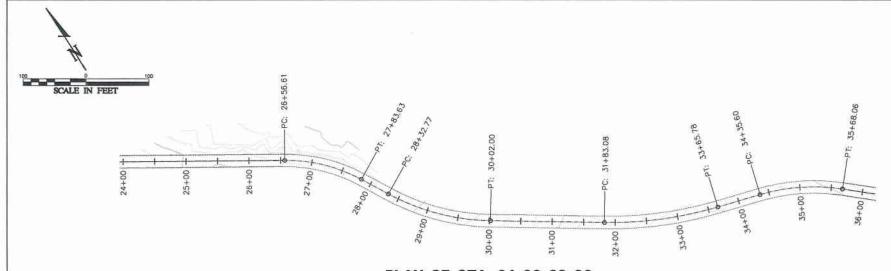
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PROJECT NO: CRU 24-23D-2118



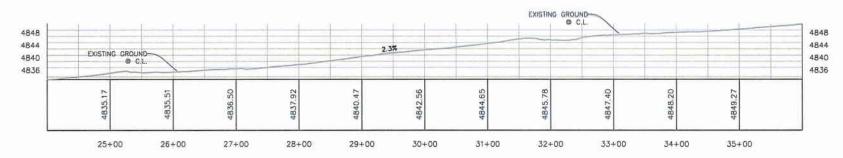
Richfield, UT 84701 (435)896-5501

DRAWN BY: C. HILL DATE: 11/4/08 SHEET NO: CHECKED BY: J. ATKIN SCALE: 1"=100" 4 OF 11



PLAN OF STA: 24+00-36+00

HORIZONTAL SCALE: 1"=100' VERTICAL SCALE: 1"=20'



PROFILE OF STA: 24+00-36+00

HORIZONTAL SCALE: 1"=100" VERTICAL SCALE: 1"=20"

CONTRACTOR NOTES:_

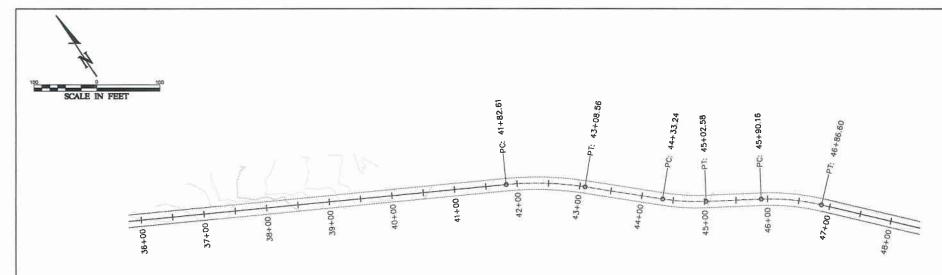
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PROJECT NO: CRU 24-23D-2118



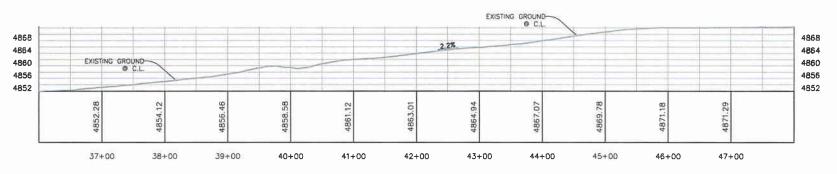
Richfield, UT 84701 (435)896-5501

CHECKED BT: J. ATKIN SCALE: 1"=100" 5 OF 11



PLAN OF STA: 36+00-48+00

HORIZONTAL SCALE: 1"=100' VERTICAL SCALE: 1"=20'



PROFILE OF STA: 36+00-48+00

HORIZONTAL SCALE: 1"=100" VERTICAL SCALE: 1"=20"

CONTRACTOR NOTES:_

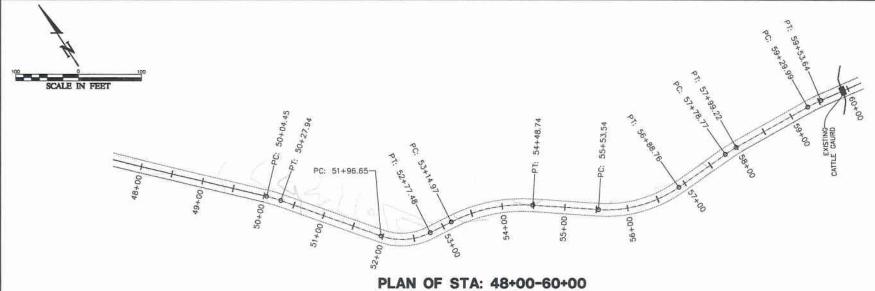
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CLIENT: NORTH AMERICAN EXPLORATION
PROJECT NO: CRU 24-23D-2118

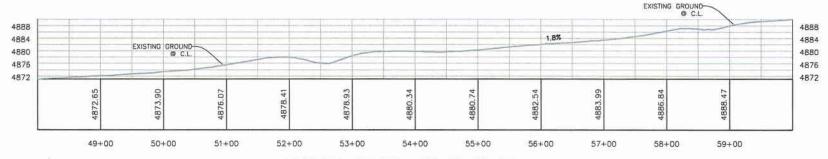


WESTERN LAND SERVICES Richfield, UT 84701 (435)896-5501

CHECKED BY: J. ATKIN SCALE: 1"=100" 6 OF 1



HORIZONTAL SCALE: 1"=100' VERTICAL SCALE: 1"=20'



PROFILE OF STA: 48+00-60+00

HORIZONTAL SCALE: 1"=100' VERTICAL SCALE: 1"=20'

CONTRACTOR NOTES:

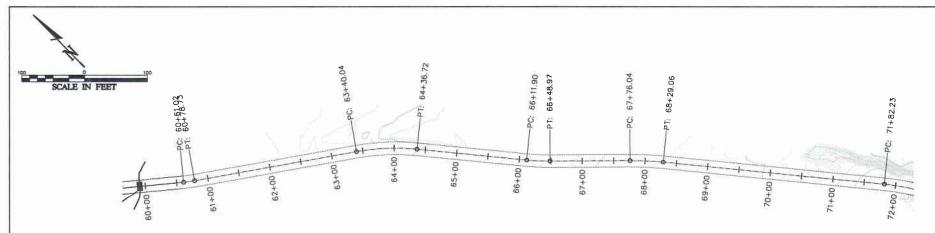
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GLIENT: NORTH AMERICAN EXPLORATION
PROJECT NO: CRU 24-23D-2118



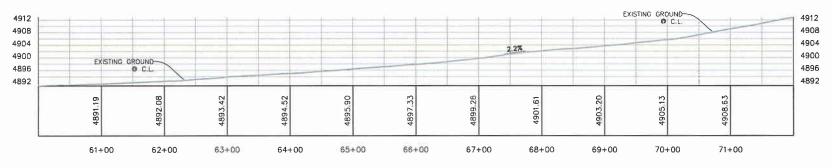
Richfield, UT 84701 (435)896-5501

DRAWN BY: C. HILL DATE: 11/4/08 SHEET NO: TOF 11



PLAN OF STA: 60+00-72+00

HORIZONTAL SCALE: 1"=100' VERTICAL SCALE: 1"=20'

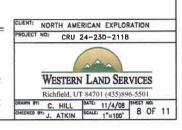


PROFILE OF STA: 60+00-72+00

HORIZONTAL SCALE: 1"=100' VERTICAL SCALE: 1"=20'

CONTRACTOR NOTES:_

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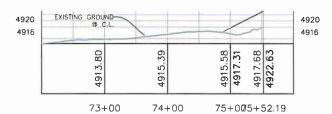






PLAN OF STA: 72+00-75+54

HORIZONTAL SCALE: 1"=100" VERTICAL SCALE: 1"=20"

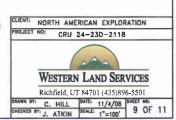


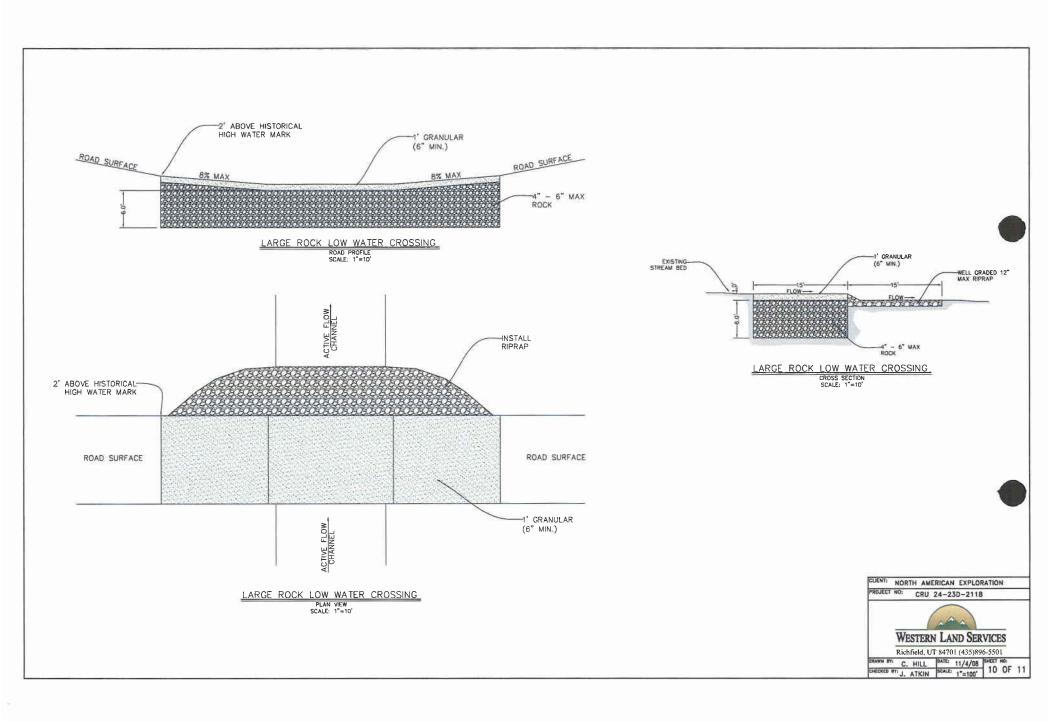
PROFILE OF STA: 72+00-75+52.19

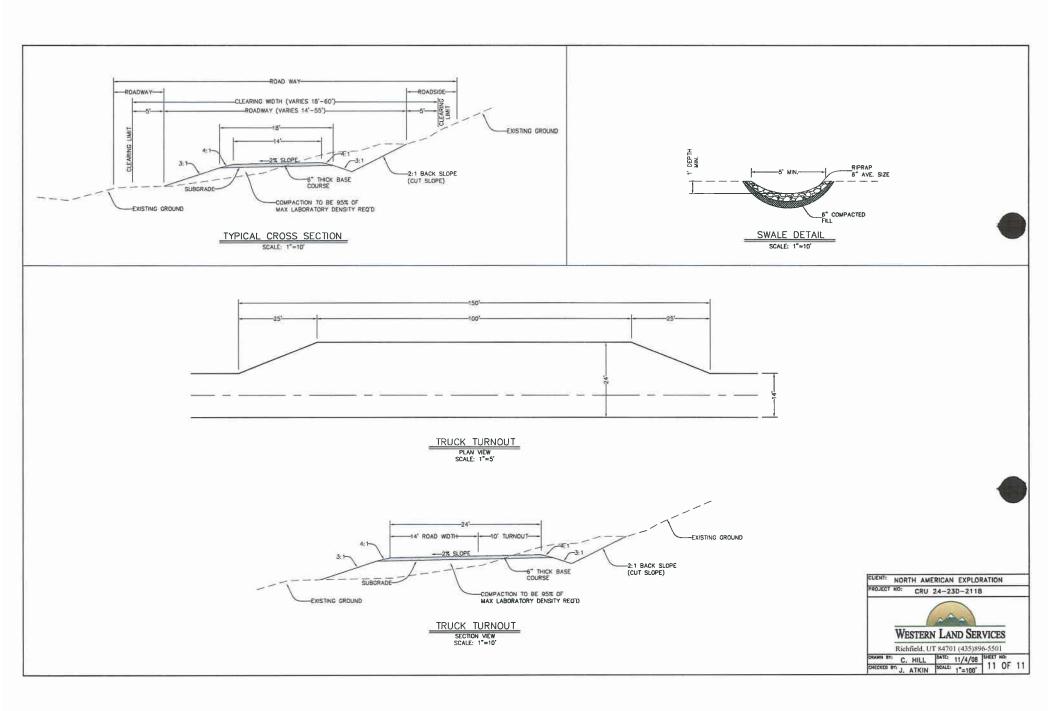
HORIZONTAL SCALE: 1"=100" VERTICAL SCALE: 1"=20"

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APD RECEIVED: 12/08/2008			API NO. ASSIGNED: 43-019-31616			
WELL NAME: OPERATOR: CONTACT:	CRU 24-23D-2118 NAE, LLC (N3440) TERRI L. HARTLE		PHONE NUMBER:	303-327-7144	1	
PROPOSED LOCATION:			INSPECT LOCATN	BY: /	/	
NESW 24 210S 180E SURFACE: 2637 FSL 2412 FWL BOTTOM: 1408 FSL 0936 FWL NWSW COUNTY: GRAND LATITUDE: 38.97160 LONGITUDE: -109.8839 UTM SURF EASTINGS: 596685 NORTHINGS: 4314009			Tech Review	Initials	Date	
			Engineering			
			Geology			
			Surface			
	ME: WILDCAT (1					
LEASE NUMBE	1 - Federal CR: UTU-79812 UER: 1 - Federal		PROPOSED FORMA!		1	
RECEIVED AND/OR REVIEWED: Plat Bond: Fed[1] Ind[] Sta[] Fee[] (No. UTB000296) Potash (Y/N) Oil Shale 190-5 (B) or 190-3 or 190-13 Water Permit (No. MUNICIPAL) RDCC Review (Y/N) (Date:) NA Fee Surf Agreement (Y/N) Intent to Commingle (Y/N)		LOCATION AND SITING: R649-2-3. Unit: SACTUS ROSE Unit terminated R649-3-2. General				
	15: 1. Leun (a)	pprovýC Anr)			

and the same of th



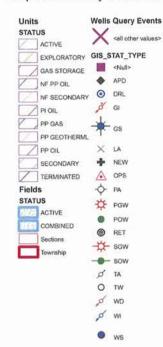
API Number: 4301931616 Well Name: CRU 24-23D-2118

Township 21.0 S Range 18.0 E Section 24

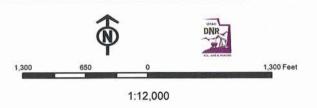
Meridian: SLBM

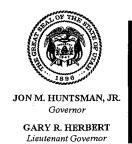
Operator: NAE, LLC

Map Prepared: Map Produced by Diana Mason









State of Utah DEPARTMENT OF NATURAL RESOURCES

FARTWEIT OF NATURAL RESOURCE

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

August 27, 2009

North American Exploration LLC 110 18th St., Ste. 1220 Denver, CO 80202

Re:

CRU 24-23D-2118 Well, Surface Location 2637' FSL, 2412' FWL, NE SW, Sec. 24,

T. 21 South, R. 18 East, Bottom Location 1408' FSL, 936' FWL, NW SW, Sec. 24,

T. 21 South, R. 18 East, Grand County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-019-31616.

Sincerely,

Gil Hunt

Associate Director

pab Enclosures

cc:

Grand County Assessor

Bureau of Land Management, Moab Office



Operator:	North American Exploration LLC			
Well Name & Number	CRU 2			
API Number:	43-019	·		
Lease:	UTU-79812			
Surface Location: NE SW	Sec24	T. 21 South	R. <u>18 East</u>	
Bottom Location: NW SW	Sec. 24_	T. 21 South	R. 18 East	

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

Contact Carol Daniels at (801) 538-5284

Notify the Division prior to commencing operations to plug and abandon the well.

• Contact Dustin Doucet at (801) 538-5281 (801) 733-0983 home

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.
- 5. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.
- 6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA

Division Director

October 12, 2010

North American Exploration, LLC 110 16TH St. Ste. 1220 Denver, CO 80202

Re:

APD Rescinded - CRU 24-23D-2118, Sec. 24, T. 21S, R. 18E

Grand County, Utah API No. 43-019-31616

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on August 27, 2009. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective October 12, 2010.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason

Environmental Scientist

ciane It (4,500

cc: Well File

Bureau of Land Management, Moab

